


## DESCRIPTION

Coto's Molded DYAD dry reed switch is ideally suited for small signal switching applications. This switch has sputtered ruthenium contacts and an extraordinary seal strength achieved by a patented laser sealed glass. In low level dry switching environments, this switch typically provides > 1 billion operations. It has hermetically sealed contacts and offers a wide range of available magnetic sensitivities. In addition, the molding process provides a solid plastic outer shell. This plastic shell provides superior mechanical strength, eliminates concerns over handling glass switches, and provides an ideal solution for high speed, automated assembly environments.



### FEATURES

- Small size
- SMT-compatible
- Easily formed leads
- Sputtered ruthenium contacts
- Hermetically sealed contacts
- Fast switching speed - up to 500Hz
- Wide range of available magnetic sensitivities
- Superior mechanical strength
- Enhanced for better auto placement
- RoHS Compliant 

### APPLICATIONS

- Security
  - proximity sensors
  - smoke alarms
- Automotive
  - level sensor
  - lamp current sensor
- Relays

## SPECIFICATIONS

All parameters are at 25°C unless otherwise stated

Parameters	Conditions	Min	Typ	Max	Units
<b>Contact Ratings</b>					
Operate ampere turns range	Full Blade Tolerance = +/-1.5 NI	10		30	NI
Release ampere turns range	Full Blade Tolerance = +/-1.5 NI	5		30	NI
Switching Voltage	Max DC/PeakAC Resistive			200	VDC
Switching Current	Max DC/PeakAC Resistive			0.5	Amps
Carry Current	Max DC/PeakAC Resistive			1.5	Amps
Contact Rating	Max DC/PeakAC Resistive			10	VA
Life Expectancy	1V, 10mA Signal Level		1000		x10 <sup>6</sup> Ops
	10V, 10mA Low Level		500		x10 <sup>6</sup> Ops
	50V, 100mA Telecom Load		2		x10 <sup>6</sup> Ops
	100V, 100mA Rated Loads		2		x10 <sup>6</sup> Ops
Static Contact Resistance	50mV, 10mA <sup>1</sup>		80	150	mOhms
Contact Material			Ru		
<b>Switch Specifications</b>					
Insulation Resistance <sup>2</sup>	100V, 25°C, 40% RH	10 <sup>9</sup>	10 <sup>11</sup>		Ohms
Capacitance	Across Open Contacts		0.3		pF
Dielectric Strength <sup>4</sup>	Between Contacts	250	300		VDC/Peak AC
	At nominal coil voltage, 10Hz Square Wave			0.5	ms
Operate Time, including bounce					
Release Time	Zener-Diode Suppression <sup>3</sup>			0.2	ms
<b>Environmental Ratings</b>					
Storage Temperature		-40		+125	°C
Operating Temperature		-40		+125	°C
Soldering Temperature				+240	°C
Vibration Resisitance	5Hz - 200Hz			20	Gs
Shock Resistance	11+/-1ms, sine wave			30	Gs
Shock Resistance-survivability	11+/-1ms, sine wave			500	Gs

<sup>1</sup> Contact resistance measured with 4 terminal method, 1.1" between test leads

<sup>2</sup> >10<sup>12</sup> ohms is available upon request

<sup>3</sup> A 24V zener in series with a diode across the coil

<sup>4</sup> 15 ampere turn minimum

**ORDERING INFORMATION**

A complete part number is represented by the digits below



**Surface Mount**

Refer to operating characteristics table for a complete part number.

**Overmolded DYAD**

Part #	Operate Range (NI) <sup>1</sup>
CM15S1015	10 to 15
CM15S1020	10 to 20
CM15S1030	10 to 30
CM15S1520	15 to 20
CM15S1525	15 to 25
CM15S2025	20 to 25

<sup>1</sup> Tolerance = +/-1.5NI

**Overmolded DYAD Surface Mount**

Part #	Operate Range (NI) <sup>1,2,3</sup>
CM15-2024	10 to 15
CM15-2259	10 to 20
CM15-2282	10 to 30
CM15-2025	15 to 20
CM15-2249	15 to 25
CM15-2026	20 to 25

<sup>1</sup> Tolerance = +/-1.5NI

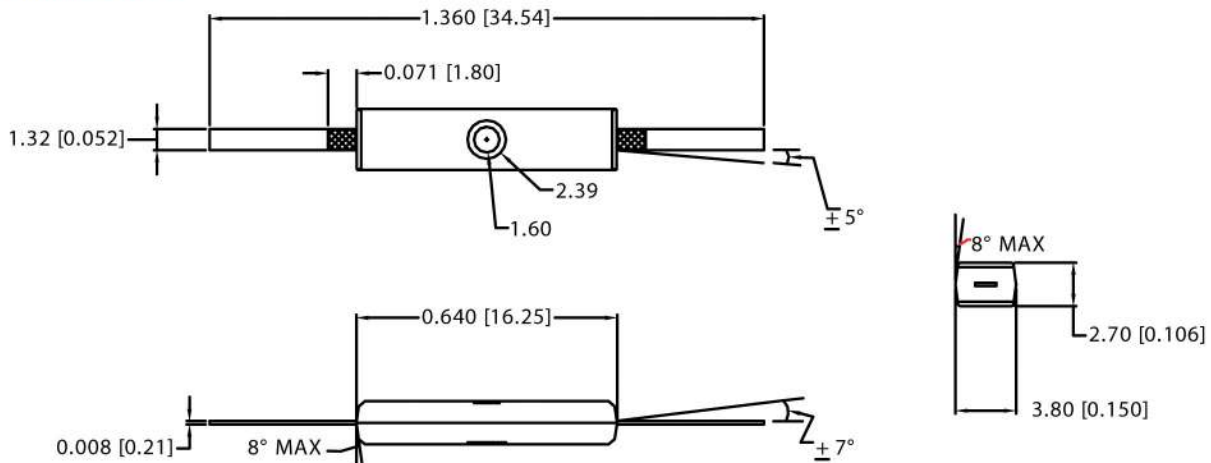
<sup>2</sup> Full Blade Sensitivity

<sup>3</sup> Surface Mount switches are packaged 3,000 parts per reel

**MECHANICAL DIMENSIONS**

Dimensions in inches (mm)

**Overmolded DYAD**



**MECHANICAL DIMENSIONS**

Dimensions in inches (mm)

Overmolded DYAD SMT

